

PRESENTATION FOR PLATFORM COMPUTING - 12/11/98

Run II Farms Processing Requirements

- Estimated Fermi MIPS:

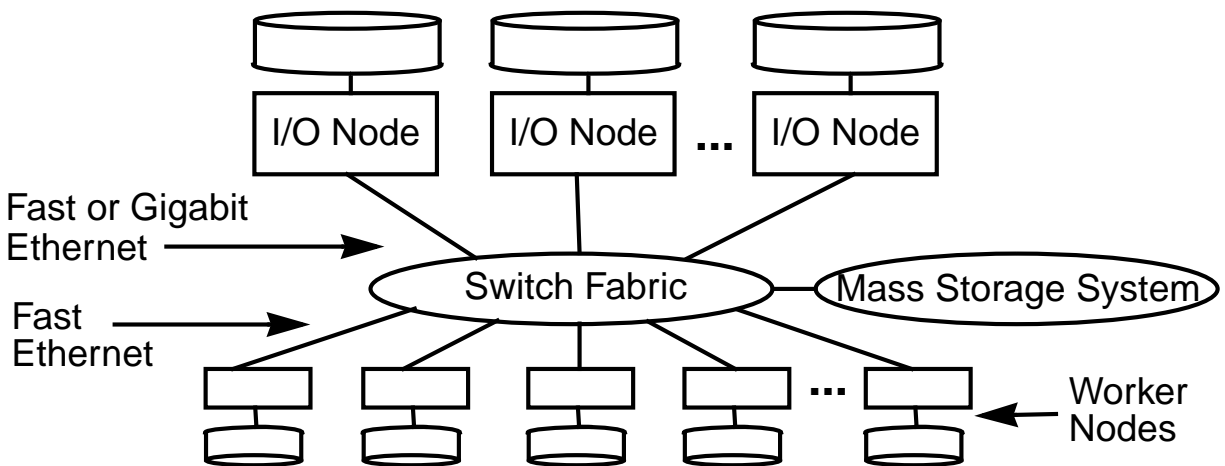
Type of Processing		Estimated MIPS			
		CDF		D0	
		Min.	Max.	Min.	Max.
Reconstruction		48,000	72,000	58,000	143,000
Monte Carlo		10,000	40,000	20,000	40,000
Reprocessing		24,000	24,000	30,000	70,000
Stripping		10,000	10,000	-	
Total (overlaps considered)	by year 2000	50,000	70,000	80,000	160,000
	by year 2001	72,000	96,000	110,000	253,000

- Estimated Number of PCs:

Estimated MIPS Considering Overlaps In Processing Types			Number of Dual Processor PCs	
			400 MHz	500 MHz
Total year 2000	CDF	50,000 - 70,000	110 - 150	90 - 125
	D0	80,000 - 160,000	175 - 350	140 - 280
	CDF+D0	130,000 - 230,000	285 - 500	230 - 405
Total year 2001	CDF	72,000 - 96,000	160 - 210	125 - 170
	D0	110,000 - 253,000	240 - 550	195 - 440
	CDF+D0	182,000 - 349,000	400 - 760	320 - 610

A PC delivers 115MIPS at 200MHz → 230MIPS at 400MHz
and 287MIPS at 500MHz.

Hardware Architecture: One Possibility



- **I/O nodes:**
 - large disk space
 - fast/direct access to the Mass Storage System
 - primarily I/O-bound tasks
- **Worker nodes:**
 - limited disk space
 - get data from an I/O node
 - primarily CPU-bound tasks

Software Architecture: One Possibility

